Notice of Allowability	Application No.	Applicant(s)	
	10/726,335	OCHI, SAM SEIICHIRO	
	Examiner	Art Unit	
	Remmon R. Fordé	2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *4/23/04*.

2. ☒ The allowed claim(s) is/are *1-14*.

3. ☒ The drawings filed on *01 December 2003* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Minhloan Tran
Primary Examiner
Art Unit 2826

DETAILED ACTION

Reasons For Allowance

Claims 1-14 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 1 recites a gate driver structure provided with a gate control signal generator having a first input and configured to output a gate control signal to a power semiconductor switch, the gate control signal generator being provided proximate a high side of the gate driver; a first sub-circuit having a first signal path and a second signal path that are suitable for transmitting signals, the first and second signal paths coupled to the first input of the gate control signal generator, the second signal path being configured to provide a signal to the first input with a reduced signal delay, including the structural limitations of providing a comparator configured to receive signals from the high side, the comparator being provided proximate a low side of the gate driver. The abovementioned structural limitations are neither anticipated by nor obvious over the prior art of record. Likewise, claims 2-9 are also allowable as being dependent upon allowable claim 1.

Claim 10 recites a power module device structure provided with a gate control signal generator having a first input and configured to output a gate control signal to a power semiconductor switch, the gate control signal generator being provided within the high side device; a first sub-circuit having a first signal path and a second signal path that are suitable for transmitting signals, the first and second signal paths coupled to the

first input of the gate control signal generator, the second signal path being configured to provide a signal to the first input with a reduced signal delay, including the structural limitations of providing a second sub-circuit that includes a third signal path and a fourth signal path that are suitable for transmitting signals, the third and fourth signal paths coupled to the second input of the gate control signal generator; a comparator configured to receive signals from the high side device, the comparator provided at the low side device, wherein the first input of the gate control signal generator receives a signal of first voltage from the first sub-circuit and the second input of the gate control signal generator receives a signal of second voltage from the second sub-circuit, wherein the gate control signal generator outputs a gate control signal according to a voltage difference between the signal of first voltage and the signal of second voltage, wherein the second signal path and fourth signal path are feed forward connections. The abovementioned structural limitations are neither anticipated by nor obvious over the prior art of record. Likewise, claims 11-14 are also allowable as being dependent upon allowable claim 10.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Relevant Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yushan et al. and Pagones each disclose gate driver integrated circuits.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Remmon R. Fordé whose telephone number is (571) 272-1916. The examiner can normally be reached on Monday-Thursday (8:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Remmon R. Fordé